381. *By Prof. W. P. Casey.* — To find a point in a given line so that the rectangle contained by two lines drawn to it from two given points may be given or a minimum (without the aid of the Cassinian Ovals).

382. *By Thomas Spencer.* — Prove in general that the chord drawn though a given point so as to cut off the minimum area from a given curve is bisected at that point.

383.—*By Prof. Edmunds* —Solve and discuss:

$$\begin{cases} x^2 + y^2 = a^2, \\ \log x + \log y = n. \end{cases}$$

384. *By Prof. Asaph Hall.*—"Show that

$$\int_0^a dx \int_0^x \varphi(x, y) . dy = \int_0^a dy \int_y^a \varphi(x, y) dx.$$

(Dirichlet's theorem.)"

385. *Selected by Prof. H. T. Eddy.*—Show that

$$\int_{-\infty}^{+\infty} \varepsilon^{(-\ ^2\cos 2\theta + \frac{a^2}{2x^2}\sin 2\theta)} \begin{matrix}\cos \\ \sin\end{matrix}\left[x^2 \sin 2\theta + \frac{a^2}{2x^2}\cos 2\theta \right] dx$$

$$= \pi^{\frac{1}{2}} \varepsilon^{-a} \begin{matrix}\cos \\ \sin\end{matrix}\left[\theta + a \right].$$

386. *By George Eastwood.*—Integrate the equation

$$\frac{d^2\psi}{dt^2} \cdot \frac{d^2\psi}{dx^2} - \left(\frac{d\psi}{dt} \cdot \frac{d\psi}{dx}\right)^2 = 0.$$

PUBLICATIONS RECEIVED.

On Gauss's Method of Computing Secular Perturbations with an Application to the action of Venus on Mercury, by GEORGE W. HILL, Assistant American Ephemeris. 4to. 1881.

The Stophoids, by WILLIAM WOOLSEY JOHNSON. Reprinted from the American Journal of Mathematics, Vol. III.

Solution of a Geometrical Problem, by PROF. E. B. SEITZ. Reprinted from the Mathematical Visitor, Vol. II, No. 1.

ERRATA.

On page 5, line 7, for a, b, c and d under the radicals, read a^5, b^5, c^5, d^5.
" " 8, " 6 from bottom, for presumptious, read presumptuous.
" " 12, lines 6 and 22, for x', read x_1.
" " 16, " 16, for 2γ, read $2r$.
" " 20, line 18, for by, read into.
" " 21, " 11, from bottom, for twice, read four times.